LANCET MINI-SERIES ON TRANSGENDER HEALTH: PAPER ONE

Transgender people: health at the margins of society.

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Introduction.

Transgender people (often called trans people) experience a degree of gender incongruence;[1] a discordance between their personal sense of their own gender (their gender identity) and the sex assigned to them at birth (birth-assigned sex).[2] ***(See Sidebar 1: 'Some terms clarified*).** A transgender man is a birth-assigned female who identifies as a man. A transgender woman is a birth-assigned male who identifies as a woman. Some transgender people identify outside the gender binary of 'man' and 'woman', identifying as neither, as both, or as somewhere on a spectrum between the two. Some individuals (particularly in cultures which accept the idea of genders beyond man and woman) identify as members of 'third genders', and/or employ indigenous gender labels. ***(See Web Appendix 1: 'Shifting terminologies, indigenous identities').***

In this paper we examine the social and legal conditions in which many transgender people live, and the medical perspectives which frame the provision of healthcare for them across much of the world. Modern research reveals much higher numbers of transgender people than was apparent in earlier clinic-based studies, as well as biological factors associated with gender incongruence.

We examine research showing that many transgender people live on the margins of society facing stigma, discrimination, exclusion, violence and poor health. Some governments are taking steps to address human rights issues and provide better legal protection for transgender people, but this is by no means universal. The mental illness perspective which currently frames healthcare provision for transgender people across much of the world is under scrutiny. The WHO diagnostic manual, currently under revision, may soon abandon its current classification of transgender people as mentally disordered. There is a debate on whether there should be a diagnosis of any sort for transgender children below the age of puberty.

In preparing this article we accessed academic papers, as well as documentation published by international agencies, governments and associated institutions, and community based organisations. Our search strategy made use of various data bases, including Google and

Google Scholar databases. We also made use of relevant list serves and journal e mail alerts to ensure we were accessing up to date documentation. The review process, which proceeded by way of several steps, included a consultation meeting in Beijing in November 2013 attended by, among others, transgender community leaders from several countries.

Before proceeding, we should emphasise two things. First, gender identity - and gender incongruence – is very much about one's experience of who one is. It is not the same as sexual orientation, which is about who one is attracted to. A transgender man may be attracted to women (including perhaps transgender women), in which case he may identify as a heterosexual transgender man. Alternatively, he may be attracted to men (including perhaps transgender men), in which case his sexual identity may be as a homosexual or gay man. Second, being transgender is not the same as being intersex. Intersex people develop atypically in regard to some or all of aspects of their biological sex. Transgender people identify in a way that does not match their assigned sex. ***(See Sidebar 2: 'Intersex and transgender')***

Gender affirming healthcare.

Transgender people may seek services from healthcare providers for reasons related to their gender incongruence (and accompanying dysphoria). They may seek information and counselling support to help explore identity issues, or to consider difficult decisions about transition, and implications for family relationships, employment and broader social stigma. Children and youth with gender issues (as well as their parents and teachers) may need support and information too.

Young adolescents going through puberty may seek gender affirming healthcare involving GnRH analogues (also called hormonal puberty blocking agents or puberty suppressants). Older adolescents and adults, may seek masculinising or feminising ('cross-sex') hormones or surgery, or a range of other services. Such healthcare is sometimes popularly described as sex or gender reassignment,[3] or gender-confirming[4] or **gender affirming** healthcare.[5]. Outcomes for gender affirming healthcare are generally very positive, whether it is

evaluated as a whole,[6 7] or the effects of hormones alone are considered.[8 9] Outcomes are positive where gender affirming healthcare is delivered in adolescence.[10]

Transgender people may seek medical services beyond gender affirming healthcare. Some will have special sexual and reproductive healthcare needs; for example associated with gamete storage or care of a surgically constructed vagina. Some may have more general healthcare needs linked to the use of hormones and silicone injections, and diseases associated with birth-anatomy (for example prostate cancer in a transgender woman). Given the likely size of the transgender population (considered later in this paper), and the range of healthcare needs, it is important that primary healthcare providers and others be trained in transgender healthcare (including protocols for referring on to specialists where available).

The size of the transgender population

We do not know how many transgender people there are, or how many experience a need for healthcare. This poses a problem for healthcare planners. The first task for the researcher in this area is to decide who to count, and by what means. Transgender people are a very diverse group. Some live with their gender incongruence, but decide not to transition. Some make a social transition only, without accessing any gender affirming healthcare. Some buy hormones 'on the street' (or on the web), or visit their local doctors rather than attending specialised clinics. In many parts of the world, stigma discourages transgender people from making their transgender status known to others, or accessing healthcare of any sort. These and other considerations present challenges to the researcher attempting to ascertain the size of the transgender population.

Faced with these difficulties researchers have tended to focus on the most easily counted subgroup; those who seek gender affirming healthcare at specialist clinics. ***(See Web Appendix 2: 'Estimating populations from clinic records and other databases').*** Clinic-based figures are important for the planning of clinic-based services**.** However such figures grossly underestimate the size of the broader population of transgender people who cannot

or do not access clinics, and tell us little about the much larger numbers who may benefit from services providing support through information and counselling rather than through bodily modification.

More direct methods for estimating population sizes, in which samples from the general population are questioned about their identity, appear to generate far higher figures, ranging from 0.5% to 1.3% for birth-assigned males, and from 0.4% to 1.2% for birth-assigned females. ***See Table 1.*** If one of the lower figures in the table, the 0.5% reported by Glen and Hurrell as an overall mean for birth-assigned males and females, [11] is extrapolated to a global population of 5.1 billion people aged 15+ (US Census Bureau, estimates for mid 2011) then the one arrives at a figure of around 25 million transgender persons worldwide. This gives some idea of the potential worldwide (and currently largely unmet) need for transgender healthcare. See ***Web Appendix 3: 'Estimating populations from population studies'*** for more information on each of the studies cited in Table 1, as well as on specific country population estimates.

Biological correlations in the development of gender dysphoria.

A growing body of scientific evidence can now be brought to bear in the long-running debate on the degree to which biological factors (especially hormonal and genetic), rather than factors such as parenting or social environment, may contribute to the development of gender identity. Putative initiating factors that are not biological are not within the scope of this section. However, it is inevitable that gender outcomes will be influenced by interactions between underlying biology and cultural norms and mores, the latter generating social pressures upon children, including from parents, to conform to behaviours typically associated with the sex assigned at birth. Despite these pressures, gender variant children identify in a way that is incongruent with their birth-assigned sex, [12] and which they may express in behaviours that contravene the norms of their own particular culture. To date, research has established no clear correlations between parenting and gender incongruence.[13,14]

In circumstances where infants have been born with ambiguous genitalia, it has been found that neither genital surgery intended to 'correct' the sex anatomy, nor parental upbringing in a social role consistent with that anatomy, guarantees that the child develops a gender identity congruent with the one to which he or she has been surgically and socially assigned. Similarly, where male infants have been surgically assigned as female following accidental damage to the penis, it is impossible to guarantee that the children will grow up identifying as girls. These findings indicate that early brain development seems to have an indelible effect on gender identity, that is resistant to normative social pressures,[15,16,17,18,19,20] and which may stem from the effects of pre-natal sex hormones [21] and/or from direct genetic effects. [22]

Biological influences are evident in a number of other research findings. Two recent studies have reported that among transgender women there are repeat polymorphisms in the gene coding for the androgen receptor, suggesting that these individuals have an atypical response to testosterone.[23,24] Other research studies report that certain chromosome anomalies in those with male phenotype (such as XXY, XYY, and mosaicism) are associated with a raised incidence of individuals who identify as women.[25,26] Additionally, in an XY fetus, low androgen levels associated with certain medication taken by the pregnant mother are also associated with a raised incidence of gender dysphoria .[27]

In another area of research, studies of family co-occurrence of gender dysphoria indicate a genetic link in a subset of these individuals.[28] Studies of twins (where one of the pair has transitioned) show that monozygotic twins have a significantly higher likelihood of concordance for transition, than do dizygotic twins. In one study 33% of male monozygotic twins were concordant for transition to live as women, among which were two pairs of twins reared apart, from birth. Concordance for transition was 23% for female monozygotic twins where one had transitioned to live as a man; this included one twin pair raised apart. By contrast, concordance for transition among male or female dizygotic twins was, essentially, zero.[29]

Studies of cerebral lateralization of neural pathways associated with listening ability reveal

male-female differences in the brains of the cisgender population (persons who identify in a way that is consistent with their assigned sex). A study of click-evoked oto-acoustic emissions in untreated children and adolescents experiencing gender incongruence (24 assigned male at birth, identifying as girls), demonstrated responses that were more in line with the 62 cisgender girl controls than with the 65 cisgender boys. The findings did not support the hypothesis that increased pre-natal exposure to androgens had an opposite effect, in relation to oto-acoustic emissions, on gender incongruent young people assigned female at birth, However, in the case of the gender incongruent birth-assigned male the authors postulate a role for atypically low testosterone levels at a critical period of sex differentiation of the brain.[30]

Similarly, a study on dichotic listening in transgender women showed that their lateralization resembles that of cisgender females (i.e. birth-assigned females who identify as women), rather than cisgender males.[31] The cohort of transgender men and women involved in this research also showed a markedly elevated prevalence of non-right-handedness compared with the cisgender population; this replicates the findings of previous studies, and reinforces the evidence of correlations between gender incongruence and atypical brain development.[32,33]

In addition, drawing on what is known about sex differences in sensitivity to specific odours, research has shown sensitivity patterns in transgender women that reflect their gender identity, rather than their birth-assigned sex, suggesting that they have sex-atypical physiological responses in specific hypothalamic circuits.[34]

Finally, post-mortem studies of small samples of transgender individuals, two of which focused on the central subdivision of the bed-nucleus of the stria terminalis, and one on the uncinate nucleus, suggest neural differentiation discordant with genital and gonadal characteristics at birth, and similar to cisgender individuals of the same gender identity.[35,36,37,38] Although not all studies on the brains of transgender people have revealed cross-sex characteristics,[39] a study by Rametti and colleagues, based on scans of the white matter in the brains of transgender men who have not yet undergone hormone treatment,

indicated that their neural patterns are masculinised and closer to birth-assigned males, rather than females.[40] Scans of these patterns in untreated transgender women showed them to be feminised and significantly different from both birth-assigned male and female controls.[41]

Taken together, the research on genital anomalies in intersex children, and others who sustain accidental damage to their genitalia, as well as research with transgender people examining gene coding and genetic anomalies, family and twin concordance, maternal drug effects, cerebral lateralisation in listening and handedness, sensitivity to odours, and brain structure, provide compelling evidence that the neurobiology of the brain is crucially important in predisposing an individual towards an incongruent gender identity. However, it may be that those experiencing gender incongruence, including those who are gender dysphoric, have one, more than one, or none of these markers. It is therefore not possible to use them diagnostically. The only valid route to understanding a person's gender identity is to listen to them.

As scientific research provides us with more glimpses into the nature and origins of gender identity we stand to gain increased understanding of what underpins our experiences of ourselves as men, women or as members of other gender categories. Whatever our scientific understandings, the needs of transgender people should be met on the basis of universally recognised human rights. It is to those rights, and their relationship to transgender people's health and wellbeing, that we now turn.

Transgender people, rights and health.

There remain places (for example in the Caribbean and much of Africa and the Middle East) for which there is little or no information about transgender people, their lived experiences and health needs. Nevertheless we know that across much of the world transgender people experience stigma on a daily basis; viewed by others in society as sexually deviant, morally corrupt, unnatural and/or mentally disordered.[42] They often experience 'minority stress', leading to poor health and well-being.[43]

Together the available reports paint a disturbing picture of discrimination and abuse (perpetrated by individuals, groups, organisations and in broader society). Transgender youth often face intolerance at home or school, and drop out of education or leave home (or indeed are told to leave). Identity documentation carried by transgender adults is often incongruent with their gender identity, and reveals their transgender status. Transgender people encounter workplace discrimination that often results in unemployment or underemployment. They drift towards poverty, especially if they dropped out of education early or left home, and are therefore unable to draw on social and financial support. Transgender people encounter problems accessing housing, basic goods and services, or even accessing spaces that are otherwise public. Living on the margins of society, often excluded from opportunities available to their fellow citizens, and with health and wellbeing compromised, many are drawn into situations and patterns of behaviour involving unsafe sexual practices and substance abuse that leave them at risk of further ill-health and wellbeing. Some engage in intentional self-harm. ***See Web Appendix 4: Reports detailing the effects of stigma upon transgender people's lives.***

Excluded from much of the workplace, transgender people (notably transgender women) often enter a narrow range of 'ghetto' occupations in which they can earn income. Many become involved in sex work,[44] often performed under conditions that put the individuals concerned at risk of acquiring sexually transmitted infections (STIs).[45] A recent global review of research into HIV prevalence among transgender populations worldwide reveals a prevalence rate 49 times greater than the background rate.[46] **(*See Web Appendix 5: 'Transgender people and HIV: the global pandemic')*.** Living life on the economic and social margins, transgender people across much of the world encounter harassment and abuse, often at the hands of law enforcement agencies, and on the basis of laws aimed at enforcing public decency and/or combatting cross-dressing and 'impersonation of the other sex'. When arrested and detained transgender people are often placed in gender-inappropriate facilities that put them at further risk of assault.

Many transgender people live with the constant threat of violence. International research documents a total of 1731 killings of transgender people between January 2008 and

December 2014.[47] Many more killings likely go unreported, or else are misreported as murders of gay and lesbian persons. Non-lethal violence against transgender people is widespread. A recent national US study indicates that 35% of individuals who expressed their identity at any time between kindergarten and Grade 12 fall victim to physical violence (and 12% become victims of sexual violence). The same study indicated that 7% of transgender adults have been physically assaulted at work (and 6% sexually assaulted).[48]

All these experiences have an impact on the emotional health and wellbeing of transgender people. Again, the same US study found that 44% of transgender people displayed clinical depression, 33% displayed anxiety, and 41% reported attempting suicide (this last figure compared to 1.6% of the general population). Research reveals some of the risk factors for suicidal behaviour in the transgender population. They include discrimination,[49] verbal and physical abuse,[50] being recognised as transgender,[51] internalised transphobia,[52] poor educational qualifications, unemployment and poverty,[53] and absence of social support.[54] [55] [56]

Worldwide the research presents what one author, writing from an Asia-Pacific perspective, has described as a slope leading from stigma to sickness.[57] **(See Figure 1)** Many transgender people experience additional stigma; for example where they are (or are perceived to be) poor, involved in sex work, or HIV positive.[58] US research spotlights yet another source of stigma – race and ethnicity - with transgender people of colour experiencing the most severe discrimination, poverty, and lack of access to basic healthcare and social services in that country.[59] A recent Australian study of transgender people from the indigenous community paints a similar picture.[60]

Social, hormonal, and surgical transition are associated with improvements in emotional health and well-being, and are widely viewed nowadays as effective treatments for gender dysphoria.[61] However, across much of the world gender affirming healthcare is unavailable, or difficult to access or afford. Mental healthcare services, scarce in many countries, [62] may be especially hard to access. Transgender people may remain at higher mortality risk even after transition, including by suicide.[63]

Even when transgender people can access gender affirming healthcare, they often find that providers lack skills in the area, and discriminate against transgender people in a way that mirrors broader society. Providers are often seen as unsupportive or hostile to transgender people's healthcare needs, and/or as providing inadequate care. [64 65 66 67] For all the above reasons transgender people often make use of parallel providers (for example silicone 'pumpers', often from the transgender community, medically unqualified and using sub-standard equipment and materials) and engage in self-administered (and unmonitored) hormone treatment,[68 69 70] sometimes as part of social gatherings.[71] Those who seek surgery and can afford it often choose to travel to other countries to get it.

Sexual healthcare for transgender people is often inadequate, with many planners, funders and providers historically failing to address the needs of transgender women as a population distinct from men who have sex with men. Neglect of the needs of transgender women has contributed to the disproportionate risk of HIV within that group, and widespread failure to develop effective interventions to address this global problem.[72 73] Transgender men's needs for sexual healthcare have been ignored almost entirely. Finally, many healthcare providers remain ill-prepared to address trans-related general healthcare needs (for example for a transgender man who is pregnant, or for a transgender woman who has prostate cancer).

In summary then, transgender people's daily experience across much of the world is one in which rights are denied. A key human rights document, the Yogyakarta principles, has detailed the ways in which existing human rights law applies to gender identity (as well as to sexual orientation).[74] The document draws on instruments of international law to which many States are signatories: for example the International Covenants on Civil and Political Rights (ICCPR) and on Economic, Social and Cultural Rights (ICESCR), the Convention on the Rights of the Child (CRC), the Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW), and the Convention Against Torture and Cruel, Inhuman and Degrading Treatment or Punishment (CAT).

Seen in the light of such documents, it is clear that many transgender people are routinely denied their rights to equality and non-discrimination; to recognition before the law; to

security of the person; to privacy; to treatment with humanity while in detention; to work; to an adequate standard of living; to adequate housing; to education; to found a family; to the highest attainable standard of health; to protection from medical abuses; to freedom of expression; to freedom of movement; and to freedom from cruel, inhuman or degrading treatment or punishment.

Many of the challenges faced by transgender people are aggravated by laws and policies which deny them gender recognition. Identity documents undermine privacy when they reveal a transgender person's birth-assigned sex, and can aggravate the risk of discrimination in education, the workplace, housing, healthcare and elsewhere. Laws and policies that impose onerous preconditions for gender recognition commonly violate a range of rights. The impact of gender recognition difficulties upon transgender people's lives is extensively documented [75] [76] [77] Authoritative voices in the fields of health and rights have highlighted the need to remove unreasonable barriers to gender recognition.[78] [79] Preconditions mandating sterilisation or genital reconstruction have been the subject of especially strong criticism,[80] [81] [82] [83] In recent years many countries have abandoned surgical requirements and other medical requirements. Some no longer link gender recognition to healthcare at all, having discarded requirements even for a diagnosis. The World Professional Association for Transgender Health (WPATH) supports such developments, advocating in recent policy statement for the right to identity recognition without social or medical preconditions of any kind.[84] ***(See Sidebar 3: Recent legislative reforms involving transgender people)***

Transgender people: mentally disordered?

Transgender people' access to healthcare is complicated by the fact that, at present, their experiences are conceptualised as a mental disorder. The view of transgender people as mentally disordered has long been criticized, with arguments focusing upon the way the diagnoses applied to transgender people psychopathologise diversity (turning difference into mental disorder), with consequences for their health and well being. It was in response to many of these arguments that the World Professional Association for Transgender Health

(WPATH) in 2010 issued a public statement which 'strongly urges the de-psychopathologisation of gender variance worldwide'.[85]

Trans de-psychopathologisation (the removal of transgender diagnoses from the list of mental disorders) has been argued on many grounds. It is possible here to summarise only some of the arguments. First, the view that transgender people are mentally disordered is an accident of history rather than one founded on scientific evidence.[86] Mental health treatments aimed at changing a person's gender identity and expression to make them more congruent with sex assigned at birth (so called reparative, 'reorientation', and 'conversion' therapies) are considered unsuccessful and unethical.[87] Instead, as will be evident from the following article, healthcare that has the aim of helping transgender people live in their affirmed gender is widely regarded as the most effective in ensuring their health and wellbeing.

Second, mental disorders are highly stigmatised conditions across much of the world, and perhaps especially in low- and middle-income countries.[88] The psychopathologisation of gender incongruence therefore leaves transgender people stigmatized. The stigma is particularly pernicious since it is transgender people's identities that are pathologised. The view of transgender people as mentally disordered prompts or reinforces discriminatory behaviour, including in the workplace. It may also undermine the willingness of healthcare providers to trust transgender people's ability to make decisions about their own healthcare, including that related to hormones and surgery.

Third, psychopathologisation can undermine transgender people's claims for recognition in their affirmed gender. The view that a transgender woman's identity is a mentally disordered one implies that she is a mentally disordered man. The transgender man is, by implication, likely to be seen as a mentally disordered woman. The view can therefore encourage (or at least provide a convenient rationale for) the questionable gender reparative therapies mentioned earlier, rather than gender affirming healthcare that supports transgender people towards greater comfort and well being living in accordance with their gender identity.

The two key publishers of diagnostic manuals have each responded to these critiques, albeit in different ways. The American Psychiatric Association (APA) Diagnostic and Statistical Manual of Mental Disorders (DSM, now it its 5th edition) contains a diagnosis called *gender dysphoria.*[89] The diagnosis focuses less on an individual's gender incongruence, and more on associated distress, than was the case in earlier editions of DSM (for example DSM-IV's *gender identity disorder*). These changes were largely in line with advice offered by WPATH.[90] While these changes are welcomed by many clinicians and researchers (and transgender people themselves) it remains the case that the distress that prompts the DSM-5 diagnosis of *gender dysphoria* is distress about gender incongruence, and the diagnosis remains one of mental disorder.

More transformative developments in diagnostic thinking are under way at the World Health Organisation (WHO), which publishes the International Statistical Classification of Diseases and Related Health Problems (ICD). The current revision, ICD-10, is freely available on the web, has been translated into 41 languages, and worldwide is the classification system most often used by psychiatrists working with patients.[91] The key diagnoses for transgender people are currently *transsexualism* (for adolescents and adults) and *gender identity disorder of childhood* (for children below the age of puberty); both located in Chapter 5 (Mental and Behavioural Disorders) of ICD-10, in a section called 'Disorders of Adult Personality'.[92] ICD is in revision, with approval of ICD-11 currently slated for 2018. A WHO Working Group on Sexual Disorders and Sexual Health has proposed to reformulate these diagnoses as *gender incongruence* (one diagnosis for adolescents and adults, and one for children below the age of puberty*).* Importantly, it has proposed that these diagnoses be removed from the Mental and Behavioural Disorders chapter, and relocated to one called 'Conditions Related to Sexual Health'.[93] If the proposals are approved and incorporated into ICD-11 then the move will be a truly historic one for transgender people and those involved in their healthcare. ***See Web Appendix 7: Diagnoses in transition.***

However, a proposal for a *gender incongruence of childhood* (GIC) diagnosis, to be used with children under the age of puberty, has generated substantial criticism ***(See Sidebar 4 'The debate around the 'gender incongruence of childhood' proposal).***

Summary

We have noted that transgender people have a gender identity that is not congruent with their assigned sex, and that they may experience discomfort or distress where opportunities to express that identity are denied them or where that identity is not respected. Some transgender people seek gender affirming healthcare aimed at bodily changes to match their gender identity. Gender incongruence is more common than clinic-based studies suggest, and may be linked to biological factors. We have seen that transgender people often encounter stigma, discrimination and abuse in their lives. They are edged towards the margins of society, where they get involved in risky situations and risky behaviours. Globally they bear a heavy burden of violence, as well as of HIV risk. Some governments are taking steps to address human rights violations against transgender people. We have seen that across much of the world transgender people have difficulty accessing or affording good quality healthcare, whether specific to their gender needs or more general in nature. The view of transgender people as mentally disordered has potentially negative impact on transgender people's health and wellbeing. WHO proposals to abandon the psychopathological model are welcomed by many researchers, clinicians and transgender communities. These reforms promise empowerment for transgender people, enabling them to exercise greater autonomy in their lives. The question as to whether there should be a diagnosis for children below the age of puberty is currently the subject of debate.

Sidebar 1: Some terms clarified	
Cisgender person	A person whose gender identity matches their sex assigned at birth, and who therefore, unlike transgender people, experiences no gender incongruence.
Gender	The attitudes, feelings and behaviours linked to the experience and expression of one's biological sex..
Gender identity	The personal experience of oneself as a boy/man, girl/woman, as a mix of the two, as neither or (especially in those cultures embracing ideas about other genders) as a gender beyond man or woman.
Gender expression	The expression of one's gender identity, often through appearance and mode of dress, and also sometimes through behaviour and interests. Gender expression is often influenced by gender stereotypes.
Gender stereotypes	Ideas, current in the culture and times in which a person lives, about the different characteristics that men and women have (and should have). Many transgender people may encounter rejection and hostility because of departure from a gender stereotype.
Gender incongruence	Incongruence between a person's own experience of one's own gender (gender identity) and the sex assigned to them at birth (birth-assigned sex).[94] The incongruence is sometimes called gender incongruence.[95] Gender incongruence can have two aspects: a. social incongruence, between one's gender identity and the gender which others recognise one to be on the basis of one's birth-assigned sex; and b. physical incongruence, between one's gender identity and one's primary and/or secondary sex characteristics.
Gender dysphoria	Discomfort or distress connected with one's own gender incongruence (social and/or physical).
Gender transition	A term used to describe a person's adoption of characteristics they feel match their gender identity.[96] Gender transition can involve changing one's appearance (including styles of dress and hair) and name, and/or (in those places where it is possible) arranging new identity documents. It may simply involve the use of a more suitable gendered pronoun. All these are aspects of social transition. Beyond this, it may involve a person in changing their physical characteristics. Physical transition can facilitate social transition; enabling styles of dress, social activities and (in many countries) changes in documentation that would not otherwise be possible. It is those who engage in a physical transition who are often popularly described as transsexual people.
Sex	One's biological status (chromosomal, hormonal, gonadal and genital) as male or female. An individual's sex at birth **(birth-assigned sex)** is usually determined based on genital appearance, with those present usually assuming that other components of sex are consistent with the newborn's genital sex.
Sexual orientation	Sexual orientation is about whom one is attracted to. In contrast, gender identity refers to one's psychological identification as a man, woman, a mix of both, or neither, or indeed another gender category..
Transgender person	Transgender people experience a degree of gender incongruence. Some intersex people, as well as persons considered by others to be cross dressers or transvestites, may experience gender incongruence (and accompanying dysphoria)
Transgender man	A transgender man is a person assigned female who identifies as a man (or in similar terms, for example a 'trans man' or as 'a man of transgender experience').
Transgender woman/	A transgender woman is a person assigned male at birth who identifies as a woman (or in similar terms, for example as a 'trans woman' or as 'a woman of transgender experience').

Sidebar 2: Intersex and transgender.

Intersex is a term often used to describe individuals who develop atypically in regard to some or all aspects of their biological sex (chromosomal, hormonal, gonadal and/or genital). Intersex conditions, of which there are many types, are anatomical, enzyme related or neurological. Gender identity issues may arise, but do not themselves form part of the intersex condition. Most intersex conditions are not readily visible. They are often unknown to the individuals concerned. Those individuals aware of an intersex condition are usually alerted to it by the genital ambiguity with which they are born. In contemporary medical literature individuals with intersex conditions are often described as having a 'Disorder of Sex Development' (DSD). This term is resisted by many on the grounds that intersex conditions should not be regarded as disorders. "Difference of Sex Development" has been suggested as a replacement term.[97]

Surgical modification of an intersex infant's genitalia, usually to achieve a less ambiguous, usually female, appearance, remains common practice in many parts of the world. Such practices can lead to complication, either with regard to adult sexual and reproductive function, or if the individual later identifies in a gender other than the one to which surgery was intended to assign him/her. In the latter case the intersex person also becomes, in effect, a transgender person. Many now regard these surgeries as unethical, and there is a vigorous debate, including in courts of law and in the media, about whether such surgeries should be performed.[98] There are important rights issues involved, touching on bodily integrity and informed consent. A more open medical approach is now being adopted in some parts of the world, in which, where possible, surgery is delayed, at least until the child's gender identity is well established, and/or the child develops a capacity for informed consent.[99] It might also be possible to assign the child to a neutral sex category pending a determination that takes account of the child's own wishes. The Republic of Malta in early 2015 outlawed any sex reassigning treatments on minors that can be deferred until the person concerned can provide informed consent.[100]

Sidebar 3: Recent legislative reforms involving transgender people.

Worldwide many countries fail to offer legal or administrative measures enabling gender recognition for transgender people. Even in Europe, often seen as progressive on these matters, 16 out of 49 Council of Europe states fail to offer any legal or administrative measures for gender recognition. Worryingly, among the 33 states which do offer such measures, 15 impose sterilisation requirements upon those who seek recognition. This is despite authoritative voices in health and rights speaking out against sterilisation requirements of this sort; viewed as a form of coercive medicine (see main text). By contrast, a number of states are moving towards less intrusive legal gender recognition arrangements. In Europe 13 (Austria, Belarus, Bulgaria, Croatia, Denmark, Germany, Hungary, Ireland, Moldova, Netherlands, Portugal, Romania and the United Kingdom) have dispensed with both surgical and hormonal requirements. Steps towards less onerous legal requirements have also taken place elsewhere in the world; in parts of Canada, the United States, Australia, New Zealand, and Nepal, India, and Pakistan.

Three European countries – Denmark, Malta and Ireland – have dispensed with medical requirements altogether (even a requirement for a diagnosis), following the lead of Argentina in adopting a 'Declaration Model', in which transgender people are able to determine their gender through a simple administrative procedure.[101] The Argentinian and Maltese laws are particularly progressive.[102] [103] First, they extend legal gender change rights to minors. At the time of writing at least two children in Argentina, one aged six years, have availed themselves of this right. Second, they explicitly affirm the right of transgender people to appropriate healthcare. The Maltese law goes the furthest of the three. It contains anti-discrimination provisions offering protection on the grounds of not only gender identity but also gender expression. Finally, in a provision of particular importance for intersex infants and young children, it prohibits any medical procedures on the sex characteristics of a minor of the procedures can be deferred until that minor can provide informed consent.

A number of countries are providing opportunities for transgender people to be recognised outside the gender binary. New Zealand, Australia, Nepal, Pakistan and India have moved,

or are moving, towards such arrangements.

Community based organisations continue to fight for gender recognition rights, and for removal of onerous requirements for approval.[104] ***See Web Appendix 6: 'Transgender people organising for health and rights'.*** Research into the impact of legislative changes on gender recognition is scant. Available findings suggest that such changes can impact on transgender people's quality of life.[105]

Sidebar 4. The debate around the 'gender incongruence of childhood' proposal.

Many transgender adolescents and adults have a need for substantial and continuing healthcare; gender affirming hormones and surgery or (for some of the youngest adolescents entering puberty) hormonal puberty blocking agents. In recent years there has been a lively debate on the best diagnostic approach for facilitating healthcare access. DSM-5 retains a mental disorder diagnosis, albeit one focusing on an individual's gender dysphoria rather than one's gender identity. The WHO Working Group on Sexual Disorders and Sexual Health has proposed that ICD-11 should contain two diagnoses (*gender incongruence of adolescence and adulthood* (GIAA), and *gender incongruence of childhood* (GIC)) focusing on the mismatch between an individual's gender identity and their assigned sex. The Working Group proposal is to place the diagnoses in a chapter called 'Conditions Related to Sexual Health'.[106]

There is general agreement that, with most healthcare systems set up as they are (and notwithstanding the rights to healthcare presently available in places like Argentina and Malta (See Sidebar 3)) a diagnosis of some sort is needed to facilitate access to puberty suppressants (adolescents) and 'cross-sex' hormones and surgery (adults). But there is considerable debate about the need for a diagnosis for pre-pubertal children, who do not need bodily modification of any sort. Instead many of these children benefit from information and advice that supports them while they explore their gender, helps them become comfortable with whatever gender identity they experience, and (in the event of gender incongruence) helps them explore the options open to them, as well as ways of coping with reactions of others to their gender issues. They need to know that their identity is respected, and that this respect for identity will continue regardless of whether their identity changes in the future. Their teachers and parents need information and support too. None of this, it is argued, justifies designating children's gender difference as a disease, and subjecting these children to the stigma of a pathologising diagnosis of the sort the *gender incongruence of childhood* (GIC) proposal represents.

Proponents of the GIC diagnosis refer, among other things, to the enabling effect it might

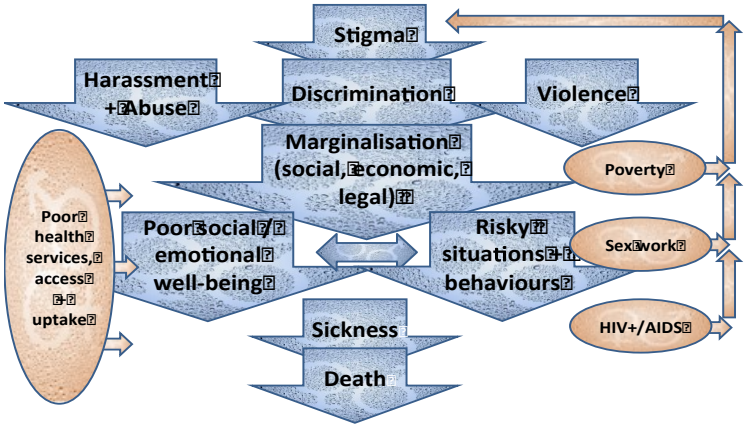
have on development of services for (and research on) the children diagnosed; children who in the majority of cases, it is claimed, 'desist', becoming more comfortable with their assigned gender as they grow older.[107] Opponents of the diagnosis remain unconvinced by these arguments, noting the favourable developments in clinical services for (and research on) gay and lesbian persons after the removal, decades ago, of the homosexuality diagnoses from the diagnostic manuals.[108] They add that the GIC proposal is inconsistent with another proposal regarding a range of residual diagnoses (such as *sexual maturation disorder* and *egodystonic sexual orientation*) that, long after the removal of the homosexuality diagnosis, continue to pathologise gay and lesbian youth exploring, coming to terms with, and learning to become comfortable expressing their sexual orientation.[109] [110] The WHO Working Group on Sexual Disorders and Sexual Health is proposing that such diagnoses be removed from ICD altogether, with Z codes being employed to enable and document access to health services on the part of such individuals.

There are alternative proposals countering the GIC proposal. An expert group convened by Global Action for Trans* Equality (GATE) in Buenos Aires in 2013 has proposed an alternative diagnostic scheme that facilitates access to the sort of support (some) young children need, as well as the documenting of such support, without stigmatizing their gender difference or undermining ethical and rights principles in work with children [111] The alternative approach makes use of ICD Z codes, which are not themselves pathologising diagnoses, but rather document factors influencing health status and contact with health services. These codes are currently located in Chapter 21 of ICD-10. Significantly, the GATE group's proposal to employ Z codes in regard to pre-pubertal children exploring their gender identity issues mirrors the WHO Working Group's own proposals in regard to young people exploring their sexual orientation issues.

Influential transgender organisations such as International Campaign Stop Trans Pathologisation (STP) and Transgender Europe (TGEU) have declared themselves opposed to the GIC proposal, on the grounds that the pathologisation of gender diversity in young children is unnecessary and harmful. In Feb 2013 in San Francisco, a meeting of experts convened by WPATH to develop a consensus on the WHO Working Group proposals was

split evenly (14:14) on the proposed GIC diagnosis.[112] Opposition to the GIC proposal appears to gather strength. A WPATH membership survey December 2014 - January 2015 indicates that outside the USA opposition to the GIC proposal is strong among professionals working in the field.[113] Meanwhile, at least two conferences have issued declarations opposing the GIC proposal, and in 2015,[114] [115]a motion was passed in the European Parliament opposing the GIC proposal.[116] Meanwhile, at time of writing, WHO is embarking on field trials for the GIC diagnosis.

Figure One: The Stigma-Sickness Slope



Adapted from a figure in Winter, S. (2012). *Lost in transition: transgender people, rights and HIV vulnerability in the Asia-Pacific region*. Bangkok: United Nations Development Programme

Table One: Population studies yielding prevalence data for transgender people

Author(s), date and country	Sample	Measure	Prevalence data		
			Birth-assigned males	Birth-assigned females	All
Conron et al (2012,) USA	28662 adults	Identification as transgender	0.5% (Note 1)	0.4% (Note 1)	0.5%
Glen and Hurrell (2012), UK	10039 adults	Identification as other gender or in another way	0.6% (Note2)	0.4% (Note 2)	0.5% (Note 2)
Clarke et al (2014), New Zealand	8166 high school students	Identification as transgender	1.3% (Note 3)	1.2% (Note 3)	1.2%
Kuyper and Wijsen (2014), Netherlands	8064 adults	Identification on gender spectrum	1.1%	0.8%	0.9% (Note 4)
Van Caenegen et al (2015), Belgium	1832 adults	Identification on gender spectrum	0.7%	0.6%	0.6% (Note 5)

Notes:
(1) extrapolated from Table 1 in paper
(2) extrapolated from Table 3 in report
(3) extrapolated from Table 1 in paper
(4) extrapolated from Table 3 in paper
(5) extrapolated from Table 3 in paper

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